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Sequence Listing was accepted.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)  
217-9197 (toll free).

Reviewer: markspencer

Timestamp: [year=2008; month=9; day=19; hr=10; min=28; sec=46; ms=330; ]

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Application No: 10551405 Version No: 1.0

Input Set:

Output Set:

Started: 2008-08-21 19:47:14.585  
Finished: 2008-08-21 19:47:19.488  
Elapsed: 0 hr(s) 0 min(s) 4 sec(s) 903 ms  
Total Warnings: 22  
Total Errors: 9  
No. of SeqIDs Defined: 22  
Actual SeqID Count: 22

Error code	Error Description
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E 257	Invalid sequence data feature in <221> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
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W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
E 257	Invalid sequence data feature in <221> in SEQ ID (11)

**Input Set:**

**Output Set:**

**Started:** 2008-08-21 19:47:14.585  
**Finished:** 2008-08-21 19:47:19.488  
**Elapsed:** 0 hr(s) 0 min(s) 4 sec(s) 903 ms  
**Total Warnings:** 22  
**Total Errors:** 9  
**No. of SeqIDs Defined:** 22  
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Error code	Error Description
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# SEQUENCE LISTING

<110> Berzofsky, Jay A.  
Okazaki, Takahiro

<120> Enhanced HIV-1 Vaccines and Methods for Their Use

<130> 015280-481100US

<140> 10551405

<141> 2008-08-21

<150> US 60/459,507

<151> 2003-03-31

<150> WO PCT/US04/09617

<151> 2004-03-29

<160> 22

<170> PatentIn Ver. 2.1

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<212> PRT

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<223> Description of Artificial Sequence:variant of  
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reverse transcriptase (RT) catalytic site region,  
immunostimulating peptide

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<221> MOD\_RES

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Xaa Leu Tyr Gln Tyr Met Asp Asp Val

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<213> Artificial Sequence

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immunostimulating peptide, RT-2L9V, 2L9V

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Val Leu Tyr Gln Tyr Met Asp Asp Val



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<222> (1)..(200)															
<223> Xaa = any amino acid, may be present or absent															
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				85				90				95			
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Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
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Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa															
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Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa															
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<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:variant of  
synthetic sequence motif derived from HIV-1  
reverse transcriptase (RT) catalytic site region,  
immunostimulating peptide

<220>

<221> MOD\_RES

<222> (1)..(200)

<223> Xaa = any amino acid, may be present or absent

<220>

<221> MOD\_RES

<222> (210)..(409)

<223> Xaa = any amino acid, may be present or absent

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20 25 30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
35 40 45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
50 55 60

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
65 70 75 80

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
85 90 95

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
100 105 110

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
115 120 125

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
130 135 140

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
145 150 155 160

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
165 170 175

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
180 185 190

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr Leu Tyr Gln Tyr Met Asp Asp

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Val Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa		
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Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa		
	275	280 285
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	290	295 300
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa		
305	310	315 320
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	325	330 335
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa		
	340	345 350
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa		
	355	360 365
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa		
	370	375 380
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa		
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<211> 9

<212> PRT

<213> Artificial Sequence

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motif, wild-type RT (179-187), RT-WT

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<223> Description of Artificial Sequence:variant of  
synthetic sequence motif derived from HIV-1  
reverse transcriptase (RT) catalytic site region,  
RT-1Y immunostimulating peptide

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peptide, gag (p17) (77-85), p17-WT

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reverse transcriptase (RT) catalytic site region  
immunostimulating peptide

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<221> MOD\_RES

<222> (1)  
<223> Xaa = any hydrophobic amino acid, preferably Val

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<212> PRT

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alanine substituted peptide 9A

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